

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A workpiece carrier comprising:
a carrier housing
a workpiece bladder coupled to said housing, said workpiece bladder comprising a plurality of annular shaped pressurizable zones each having a surface configured to press against a surface of a workpiece; and
~~at least one~~ a pressure transducer for each of said pressurizable zones mounted to said carrier housing for controlling pressure provided to ~~said workpiece bladder~~ each pressurizable zone.
2. (Cancelled)
3. (Original): The workpiece carrier of claim 1 further comprising at least one valve mounted to said carrier.
4. (Original): The workpiece carrier of claim 1 further comprising a control board mounted to said carrier.
5. (Currently Amended): The workpiece carrier of claim 1 further comprising means for automatically calibrating ~~said at least one~~ each pressure transducer.
6. (Currently Amended): An integrated pressure control system for planarizing a workpiece comprising:
a multizone workpiece carrier having a plurality of annular shaped pressurizable zones;
and
a pressure control system mounted to said carrier for controlling pressure provided to said plurality of pressurizable zones.
7. (Original): The integrated pressure control system of claim 6 further comprising an automatic calibration system for calibrating said pressure control system.

8. (Original): The integrated pressure control system of claim 6 wherein said pressure control system comprises at least one pressure transducer.
9. (Original): The integrated pressure control system of claim 8 wherein said pressure control system further comprises at least one valve.
10. (Original): The integrated pressure control system of claim 6 further comprising a rotary union for connecting electrical lines to said pressure control system.
11. (Original): The integrated pressure control system of claim 10 wherein said rotary union further connects an air supply line and an air exhaust line to said pressure control system.
12. (Withdrawn): A carrier insert for a multizone workpiece carrier comprising:
a pneumatic manifold having a plurality of ports in alignment with a plurality of pressurizable zones located in said multizone workpiece carrier; and
at least one pressure transducer mounted to said pneumatic manifold.
13. (Withdrawn): The carrier insert of claim 12 further comprising at least one valve mounted to said pneumatic manifold.
14. (Withdrawn): The carrier insert of claim 13 further comprising a control board mounted to said pneumatic manifold.
15. (New): An integrated pressure control system for planarizing a workpiece comprising:
a multizone workpiece carrier having a plurality of pressurizable zones;
a pressure control system mounted to said carrier for controlling pressure provided to said plurality of pressurizable zones; and
a rotary union for connecting electrical lines to said pressure control system.
16. (New): The integrated pressure control system of claim 15 further comprising an automatic calibration system for calibrating said pressure control system.
17. (New): The integrated pressure control system of claim 15 wherein said pressure control system comprises at least one pressure transducer.

18. (New): The integrated pressure control system of claim 17 wherein said pressure control system further comprises at least one valve.
19. (New): The integrated pressure control system of claim 15 wherein said rotary union further connects an air supply line and an air exhaust line to said pressure control system.
20. (New): A workpiece carrier comprising:
 - a carrier housing;
 - a workpiece bladder coupled to said housing, said workpiece bladder having a surface configured to press against a surface of a workpiece;
 - at least one pressure transducer mounted to said carrier housing for controlling pressure provided to said workpiece bladder; and
 - a rotary union mounted to said carrier for connecting said at least one pressure transducer with a control board.
21. (New): The workpiece carrier of claim 20 wherein said bladder comprises a plurality of pressurizable zones and each zone has a pressure transducer for monitoring pressure to that zone.
22. (New): The workpiece carrier of claim 20 further comprising at least one valve mounted to said carrier.
23. (New): The workpiece carrier of claim 20 wherein said control board is mounted to the carrier.
24. (New): The workpiece carrier of claim 1 further comprising means for automatically calibrating said at least one pressure transducer.